

Memorandum

TO: Ravalli County Planning Department

FROM: Kylie Paul, Land Use Clinic, University of Montana School of Law

DATE: May 20, 2007

RE: Highway 93 S Corridor Plan: Sample Wildlife Crossing Overlay District with Buffer Approach

OVERVIEW

The high level of vehicle collisions with animals along Highway 93 South in Ravalli County has been a concern to many citizens and decision-makers in the region. To address this concern, the Montana Department of Transportation (MDT) has installed or will install numerous wildlife crossing structures in the form of underpasses using culverts and extension of bridges under Highway 93 South in Ravalli County. Numerous studies have shown that wildlife crossing structures reduce road-kill levels, particularly when combined with wildlife fencing that funnels wildlife to the structures.

Since adding several wildlife crossing structures, MDT has been concerned about the sustainability of their effectiveness, as developments on private land within the vicinity of the structures have recently been built. Developments and ensuing disturbance would likely deter wildlife from using the crossing structures, therefore losing or irreparably damaging the value of the wildlife crossing structures. These crossing structures are a considerable public expense, and their effectiveness is reliant upon the surrounding land use.

In 2006, MDT approached the County with these concerns over the lack of land use regulations along the highway in relation to development surrounding the wildlife crossing structures. Protection of wildlife and wildlife habitat and protection of highway travelers from wildlife encounters were specific concerns of many participants at the Ravalli County Public Meetings on Land Use in the Highway 93 South Corridor in 2006. Additionally, the Ravalli County Growth Policy directly implicates protection of wildlife and habitat in Countywide Policy 5.1 and 5.3. It is tangentially implicated in Countywide Goal 1B and 5. In response, Ravalli County contacted the Land Use Clinic. This sample Wildlife Crossing Overlay District is a result of the research performed by the Clinic, and is one way in which the County can accomplish the goal of maintaining the effectiveness and value of the wildlife crossing structures.

DISCUSSION

Regulatory tool

Zoning, rather than amending subdivision regulations, was chosen as an overall approach

to accomplish the goal of protecting land surrounding the wildlife crossing structures, as it allows long-term, comprehensive planning across the county's landscape, regulates use, and is not limited to just those developments involving a land division. An overlay zone was selected to superimpose additional regulations specifically targeted to protect these specific sensitive areas. An overlay zone is especially useful when the specified areas of concern cross several different standard zoning districts. The practice of using overlay zoning to protect important natural features is common throughout the nation. Many of the concepts within this overlay sample were drawn from these examples. Yet, no language was found relating directly to wildlife crossing structures. It was for this reason that fully drafted overlay district regulations were developed, to provide sample language for the County if it wishes to pursue this protection of land adjacent to wildlife crossing structures.

Regulatory approach

A permissive use approach was taken in this sample overlay. A permissive use approach prohibits uses of land unless they are expressly allowed as primary uses or a variance is gained. This sample overlay avoided requiring a citizen to apply for a permit prior to the citizen's desired activity. This was done mainly to minimize County workload by avoiding the issuance of permits for changes in uses and structures. Instead, affected citizens must be aware of those activities regarding uses and structures that are allowed, not allowed, or restricted within the overlay district. To ensure compliance, the County must enforce the Regulations, with ensuing penalties. However, it is believed the amount of work needed will be less than one requiring permits, particularly as the location of the overlay district is generally open to public view by County enforcement officials. If better enforcement is the priority, then an approach using permits, though more labor intensive, is suggested.

Use of buffers

Buffers are frequently used within land use planning to allow protection of land and wildlife on private lands. The intention of the buffer in this sample overlay is to provide animals an area of little increased human disturbance, as human activities may cause an animal to alter its activity and feeding patterns, increase its stress level with resulting reduced body condition, or abandonment of the area.

Numerous research studies have shown the habitat needs of wildlife species, from birds to fish, providing suggestions of widths of buffers needed to support species of interest. The widths selected for this sample overlay were drawn from the literature, the expert opinion of several wildlife biologists, and examples of habitat protection ordinances/regulations from the region. While there is not precise agreement on the widths of buffers within the literature, as they may depend on target species habitat requirements and unique regional landscape qualities, the widths selected in this sample overlay are general averages for a variety of species supported by the resources examined.

While principles guiding the dimensions of the buffers are within the sample regulation, the specific paths of the buffers would need to be determined and mapped. It is

suggested that wildlife biologists be involved to ensure the most effective pathway for wildlife.

Variances/Property Rights

As these important lands adjacent to the wildlife crossing structures are on private property, the issue of the taking of property rights was constantly considered in the drafting of this sample overlay. To allow affected landowners the flexibility they are entitled, a variance procedure was provided and uses and structures already in existence are considered non-conforming. Additionally, residential density that cannot be realized due to the buffer can be shifted to unaffected portions of the same property/lot.

SAMPLE STATUTORY LANGUAGE

Proposed Wildlife Crossing Overlay District with Buffer Approach

WHEREAS, the Montana Code Annotated (MCA) in 76-2-201(1) authorizes counties that have adopted a growth policy to adopt zoning regulations for all or parts of the jurisdictional area; and

WHEREAS, the Ravalli County Growth Policy Countywide Goal 1B is to “promote private open land, farm land, ranch land, and recognition of agriculture and forestry as valued land resources”¹ which is supported by these Regulations, as their purpose is to maintain private open land to assist in protecting wildlife movement; and

WHEREAS, the Ravalli County Growth Policy Countywide Goal 5 is to “protect and enhance natural resources and public open space;”² and

WHEREAS, the Ravalli County Growth Policy Countywide Policy 5.1 states “while recognizing the private property rights of landowners, conserve and enhance the quality and quantity of wildlife, fisheries, forest and other natural resources in the Bitterroot Valley;”³ and

WHEREAS, the Ravalli County Growth Policy Countywide Policy 5.3 is to “use planning tools to ensure consideration is given to natural resources;”⁴ and

WHEREAS, Ravalli County provides important habitat for many wildlife species near the highway corridor as it follows the valley bottom; and

WHEREAS, wildlife and their habitat requirements are not based on land ownership, but rather, are intertwined with the Bitterroot National Forest, the Selway-Bitterroot Wilderness, the Lolo National Forest, the Beaverhead-Deerlodge National Forest, the Salmon National Forest, and the Lee Metcalf National Wildlife Refuge. Many species make long distance movements and require habitat connectivity between such core habitat areas and across the highway; and

WHEREAS, protection of wildlife and wildlife habitat is important to Ravalli County’s economy and to the economy of the State of Montana; and

WHEREAS, the high incidence of vehicular traffic crashes involving wildlife on

¹ Ravalli County Growth Policy (MT) Section 3.1B (2005).

² Ravalli County Growth Policy (MT) Section 3.5 (2005).

³ Ibid.

⁴ Ibid.

Highway 93 S in Ravalli County has a significant impact on the public health, safety, and general welfare of the public; and
WHEREAS, to promote public safety and protect wildlife, the MDT has installed or will install wildlife crossing structures in the form of underpasses through culverts and extension of bridges under Highway 93 South in Ravalli County; and
WHEREAS, research has shown that wildlife crossing structures, particularly when combined with wildlife fencing, are important in reducing animal-vehicle collisions and in maintaining wildlife movement across the highway corridor;⁵ and
WHEREAS, the locations of these wildlife crossing structures were developed through a collaboration of biologists from MDT, MFWP, and USFS as well as engineers using their science expertise and local knowledge; and
WHEREAS, development, high levels of human activity, or alteration of landscape elements near a wildlife crossing structure could impede or obstruct movements towards the structures, preventing animals from using them, thus rendering them ineffective⁶ and therefore impacting the Ravalli County and Montana taxpayer's investment; and
WHEREAS, the Ravalli County Growth Policy Countywide Policy 4.1 is to "encourage development that will minimize or avoid additional costs to existing taxpayers" and Countywide Policy 4.2 is to "consider the cumulative impacts of development"⁷ and
WHEREAS, reducing impacts of development, high levels of human activity, or alteration of landscape elements can be accomplished with buffers in order to preserve the viability of the wildlife crossing structures; and
WHEREAS, the buffer width is consistent with scientific literature to support various wildlife species⁸;

NOW, THEREFORE, be it ordained by the Board of County Commissioners of Ravalli County, Montana:

SECTION 1. That there be added to _____ a new section designated _____ to read as follows:

A. Title

These Regulations shall be known and may be cited as the "Ravalli County Wildlife Crossing Overlay District Regulations."

B. Purpose

These Ravalli County Wildlife Crossing Overlay District Regulations (Regulations) are adopted for the purpose of preserving and improving the public health, safety, and general welfare of the citizens of Ravalli County by helping to reduce animal-vehicle collisions and protect wildlife, an important natural resource. More

⁵ See supporting document

⁶ See supporting document

⁷ Ravalli County Growth Policy (MT) Section 3.4 (2005).

⁸ See supporting document

specifically, these Regulations are narrowly tailored to maintain and enhance wildlife movement through wildlife crossing structures under Highway 93 for the health and welfare of citizens and wildlife by limiting human disturbance near the wildlife crossing structure, while accommodating human activities and development harmonious with wildlife and wildlife habitat. This thereby maintains the value and effectiveness of the wildlife crossing structures, and in doing so protects the Ravalli County and Montana taxpayers' investment.

C. Statutory Authority

These Regulations are adopted pursuant to Montana Code Annotated 76-2-201 through 76-2-228.

SECTION 2. WILDLIFE CROSSING OVERLAY DISTRICT

A. There is hereby established the Ravalli County Wildlife Crossing Overlay District (WCO District), which, in areas where it applies, shall overlay all other base zoning districts within Ravalli County. The WCO District is composed of Wildlife Buffers approaching the wildlife crossing structures at Highway 93 S, where protection is essential to maintain the effectiveness of the wildlife crossing structures. If a new wildlife crossing structure is constructed, a new Wildlife Buffer will be created at that location.

B. Official Zoning District Map

The Official Zoning District Map (Map) depicts the boundaries of the Wildlife Buffers within the WCO District.^{9 10} The Map shall be updated upon the addition of a new Wildlife Buffer. The Map shall be available for viewing at the Ravalli County planning office.

C. Wildlife Buffers^{11 12}

Wildlife Buffers within the WCO District shall be delineated as follows:

1. Category 1: Bridges and Large Mammal Crossing Structures

The minimum width of the Wildlife Buffer shall be 150 feet¹³ on either side of a 'path' stemming from the bridge or large mammal crossing structure.¹⁴ This 'path' shall be a stream/creek or shall be a line included

⁹ The boundaries of Wildlife Buffers may be shown on the map as well.

¹⁰ The precise location of each wildlife crossing structure will need to be obtained from MDT; while the Land Use Clinic has a spatial layer of the wildlife crossing structures, the locations are not precise.

¹¹ It is very important that a wildlife biologist assist with the mapping to ensure 'paths' are created that most effectively enhance wildlife movement and connectivity.

¹² This language can be changed to "The Wildlife Buffer dimensions shall be as indicated on the Map" if the Wildlife Buffers are to be mapped to particular dimensions based on site specific conditions following individual analysis of each crossing structure. This can allow more flexibility at individual Wildlife Buffers.

¹³ Based on wildlife biology experts, it is suggested that this distance not be reduced, and that it be increased wherever possible.

¹⁴ An option here can include: "The width of the Wildlife Buffer may be reduced in size if the owner can demonstrate/prove, within the variance process, that the 150 foot width is excessive for maintaining or improving wildlife movement through the wildlife crossing structure. However, the width of the Wildlife Buffer shall not be less than 100 feet and the length shall remain as above. " However, this could act as a

on the Map following a naturally vegetated feature (such as a ravine) or extending perpendicularly from the highway if no such features exist. This Wildlife Buffer shall extend from the bridge or large mammal crossing structure to the boundary of the corridor border, as shown on the Map.

2. Category 2: Small Mammal Crossing Structures

The Wildlife Buffer shall surround a naturally vegetated habitat feature, as shown on the Map.¹⁵

SECTION 3. APPLICABILITY

A. These Regulations apply to all activities and development occurring in the WCO District.¹⁶

B. Any activity or development that does not require any other county project permit or approval must still comply with the substantive and procedural requirements of these Regulations.

C. Areas within a WCO District may also be subject to other regulations, due to the overlap or multiple functions of some sensitive or critical areas. Riparian areas, for example, may be defined and regulated according to other provisions of this chapter. In the event of any conflict between regulations for particular sensitive areas in this chapter, the regulations which provide greater protection to environmentally sensitive areas shall apply.

SECTION 4. STANDARDS FOR DEVELOPMENT IN THE WCO DISTRICT

A. Regulations

No person shall engage in any activity that will disturb, remove, fill, dredge, clear, or destroy an area or vegetation within the Wildlife Buffer unless otherwise provided in Section 4(B).

B. Allowed Uses in the WCO District¹⁷

1. Nonconforming Structures and Uses

a. Structures

double-edged sword, as it may improve the possibility of public approval of this overlay zone, but it has the potential for granting flexibility that is not justified and could threaten the effectiveness of this regulation.

¹⁵ The Small Mammal Crossings generally connect local drainages and wetland areas. Therefore, the Wildlife Buffer should aim to preserve those habitat features and should trace the boundaries of those habitat features. As this will be site-specific, no numerically-limited buffer was provided.

¹⁶ Further legal counsel is suggested to determine applicability within citizen-initiated zoning districts.

¹⁷ New agriculture is not allowed in the Wildlife Buffer. Depending on the interpretation of 76-2-209 MCA, this could be acceptable since the regulation is confined to the Wildlife Buffer and therefore does not prevent the “complete” use, development, or recovery of any agricultural, mineral, or forest resource. It could be a problem if it was interpreted to be completely preventing a use from any part of land. A legal opinion is suggested.

- i. Maintenance, repair, or improvement of any lawfully established building or structure that was in existence prior to the effective date of these Regulations shall be allowed as a non-conforming structure, provided that no such building or structure shall be enlarged or expanded or shall have the floor area increased beyond that existing on the date of these Regulations by more than twenty (20) percent. Maintenance, repair, or improvement of fencing shall follow fencing standards of Section 4(A)(2)(c). These activities shall occur through the method that results in the least impact to the WCO District.
 - ii. Replacement of lawfully established, nonconforming structures damaged beyond repair or destroyed may be allowed if there is no alternative location outside of the WCO District to accommodate the structure. If a damaged or destroyed structure is allowed to be replaced within the WCO District, replacement/relocation shall occur only within the existing building footprint or as the same may be increased by 20 percent.
 - iii. Maintenance, operation, and reconstruction of existing roads, streets, utilities and associated structures that were in existence prior to the effective date of these Regulations shall be allowed, provided that reconstruction of any facilities shall not increase the impervious area and these activities shall occur through the method that results in the least impact to the WCO District.
- b. Uses
 - i. Legally established land use and development in existence prior to the effective date of these Regulations shall be allowed as a non-conforming use.
 - ii. Activities involving nonconforming structures or uses within the Wildlife Buffer shall not create disturbance of natural vegetation, unless otherwise noted in Section 4(B)(3). Maintenance of lawfully established lawns, landscaping, and gardens in existence prior to the effective date of these Regulations is allowed provided it does not involve any expansion beyond its existing location.
 - iii. Discontinued nonconforming uses may be resumed any time within one year from such discontinuance but not thereafter when showing clear indications of abandonment. No change or resumption shall be allowed that is more detrimental to the WCO District, as measured against the purpose under Section 1(B), than the existing or former nonconforming use.
 - 1. This one-year time frame shall not apply to agricultural uses that are following prescribed conservation practices for crop rotation. However, resumption of agricultural uses must be strictly confined to the extent of disturbance existing at the time of adoption of these Regulations.

2. Fencing¹⁸

a. Fencing regulations

No fencing shall be allowed in the Wildlife Buffer, unless it is a property boundary fence following Fencing standards in Sec 4(B)(2)(b). Fencing shall be allowed on the boundary of the Wildlife Buffer.

b. Fencing standards

Wire fencing shall have three strands or less. The top wire shall be barbless and at a maximum height of forty-two inches. The middle strands, which may be barbed, shall be located a minimum of twelve inches from the top wire to prevent entanglement when animals jump over the fence. The bottom strand shall be barbless and a minimum of eighteen inches from the ground. Wood rail fencing shall employ three rails or less and shall not exceed forty-two inches in height above ground level, and the lower rail shall be a minimum of eighteen inches from the ground.

3. Conservation Practices

a. Planting native vegetation

Planting of native vegetation for wildlife habitat enhancement, particularly in areas that have been previously disturbed by clearing or similar disturbance, shall be allowed in the WCO District.

b. Noxious weed removal

Removal or destruction of noxious weeds shall be allowed, pursuant to its replacement with native vegetation.

c. Tree hazard

Removal of trees that may result in likely property damage or personal injury to non-conforming structures shall be allowed.

4. Recreation

Non-motorized passive and low-impact outdoor recreation activities including fishing, hiking, bird-watching, photography, canoeing, swimming, and similar activities shall be allowed in the WCO District.

5. Domestic Animals¹⁹

Pets shall be allowed within the Wildlife Buffer only when accompanied by a human.

6. Exterior lighting

No exterior lighting shall occur within or that spill over onto the Wildlife Buffer.

¹⁸ Fencing is a structural element with which wildlife has particular difficulty as it creates a serious impediment to wildlife movement.

¹⁹ Domestic animals, especially dogs, can pose a serious threat to the survival of wildlife by killing, injuring, chasing, and harassing wildlife.

7. Emergency Action

Emergency action, necessary to prevent imminent threat or danger to public health or safety, public or private property, or serious environmental degradation, shall be allowed in the WCO District when such activities and installations cannot reasonably be contained to areas not within the WCO District. Such action shall be undertaken with the utmost sensitivity to natural features. In any case in which a person undertakes such emergency action, the person shall notify the County within one working day of the emergency action.

C. Density Calculations-

An owner of property within or partially within the WCO District may transfer up to 100 percent of the residential density that could be achieved within the WCO District portion of the site to another portion of the same property not within the WCO District, subject to the density limitations of the overall site, and provided that the area not within the WCO District to which density is transferred shall not be constrained by another environmentally critical area regulated by the County or State.

SECTION 5. VARIANCES FOR WCO DISTRICT

A. Purpose

Implementation of variances in Montana and other states has led to unpredictability and has undermined planning and zoning. The purpose of this Section is to minimize those risks by ensuring that variances be allowed only in truly exceptional circumstances and after careful and thorough deliberation.

B. Standards for Variance

The intent of this Section is to ensure that reasonable use may be made of property. However, no variance from the terms of these Regulations shall be allowed unless the applicant proves each of the following criteria by clear, cogent, and convincing evidence and unless there is full compliance with the following procedures:

1. No variance shall be granted unless the owner seeking the variance would suffer unnecessary hardship if the variance were not granted. A variance may be granted if the application of these Regulations precludes reasonable uses of the owner's property a part of which is within the WCO District because of special circumstances applicable to the subject property, including but not limited to the particular physical surroundings, shape, or topographical conditions of the property involved, rather than the personal situations of the applicant or the result of any action or inaction by the applicant or owner or any predecessors in title.
2. That the applicant for the variance could realize a higher rate of return if the variance were granted shall not be deemed an element of, or a basis for, a claim of unnecessary hardship.
3. The variance must not be injurious to the public health, safety, and general

welfare of the community. The variance must not impair, or be inconsistent with, the Ravalli County Growth Policy. The variance must not impair the intent or purpose of these Regulations.

4. The variance must not adversely affect the general character, the use, or the value in the surrounding area.

C. Variance Conditions

1. Any variance granted hereunder shall be the minimum necessary to alleviate the unnecessary hardship.²⁰
2. In issuing a variance, the Ravalli County Board of County Commissioners may impose such conditions and restrictions upon the property benefited to minimize the injurious effect of the variance. Conditions may relate to the locations, design, and maintenance of existing and proposed improvements, including but not limited to buildings, structures and use areas, natural vegetation and landscaped areas, fencing, screening and buffering excavations, cuts and fills, timing of construction and related activities. Conditions may include but are not excluded to: identification of a building envelope, mitigation requirements, and a stewardship plan.

Procedural requirements for variances have been left to complete by the Ravalli County Commissioners or as set forth in MCA. Enforcement regulations have also been left to complete by the Ravalli County Commissioners.

SECTION 6. DEFINITIONS

“Agriculture” means all aspects of farming, ranching, forestry or lumbering operations, including the cultivation or tilling of soil; dairying; the production, cultivation, growing, or harvesting of agricultural, horticultural or silvicultural commodities, raising of livestock, bees, fur-bearing animals or poultry; and any practices, preparation for market or delivery to storage, to market, or to carriers for transportation to market.

“Bridges and large mammal crossing structures” means specific bridges that are structures over streams designed with pathways along the stream for wildlife movement. The pathways are approximately 2 meters wide with ≥ 2 meter head clearance. Large mammal crossings are culverts ≥ 3 meters diameter specifically designed for use by large mammals. These structures have earth flooring, landscaping at culvert openings, and are associated with wildlife fencing at some sites.

“Connectivity” means extent at which a species or population can move among landscape elements in a mosaic of habitat types. This necessitates linkages among individuals, species, communities, and ecosystems at appropriate spatial and temporal scales. Corridors are one means of achieving connectivity.

²⁰ It is suggested that county biologists (or other wildlife experts) be consulted when determining the impact of a proposed variance

“Corridor border” means one half-mile perpendicular from Highway 93 S in Ravalli County, as per the study area provided to the Land Use Clinic.

“Development” means the process of improving land, subdividing land, or building structures on land for human use.

“Impervious surface” means a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roofs, walkways, patios, driveways, parking lots, storage areas, areas which are paved, graveled or made of packed or oiled earthen materials or other surfaces which similarly impede the natural infiltration of surface and storm water.

“Maintenance, repair, or improvement” means work required to keep existing improvements in their existing state.

“Mitigation” means measures taken to eliminate or minimize impacts of development activities.

“Native vegetation” means plant species which are indigenous to the area.

“Noxious weed” means a plant, which is of foreign origin, and can directly or indirectly injure crops, other useful plants, livestock, or poultry or other interests of agriculture, including irrigation, or navigation, or the fish or wildlife resources of the United States or the public health.

“Open land” means privately owned undeveloped Land that is free of housing or commercial development. Land that is not excessively encumbered with human structures is in the condition of being open land.

The term “open land”, as used in this document is a condition that exists naturally, it is not a political or legal classification of land.

“Public health and safety” means a condition of optimal well being, free from danger, risk, or injury, for a community at large, or for all people, not merely for the welfare of a specific individual or a small class of persons.

“Riparian areas” means land that is traversed or bounded by a natural watercourse (river, stream, lake) that includes the vegetation growing adjacent to the watercourse.

“Small mammal crossing structures” means culverts ≥ 1.2 meters with ramps and platforms designed to accommodate passage of small mammals, typically acting as a small mammal conduit and a hydrologic connection to relatively expansive or important wetlands situated on both the east and west sides of the highway.

“Utilities” means all lines and facilities used to distribute, collect, transmit, or control electrical power, natural gas, petroleum products, information (telecommunications), water, and sewage.

“Wildlife” means animals (including mammals, birds, reptile and fish) that exist in their natural environment. These exclude domesticated species.

“Wildlife crossing structure” means a structure designed to allow wildlife to pass beneath or above a roadway instead of upon the vehicular traffic surface. Specified between Bridge and Large Mammal Crossings, and Small Mammal Crossings.